TELEPHONE (661) 410-7500 FAX (661) 410-7506

VALLEY WATER MANAGEMENT COMPANY
7500 MEANY AVE.
BAKERSFIELD, CALIFORNIA 93308

June 17, 2016

Mr. Ronald Holcomb
Central Valley Regional Water Quality Control Board
1685 E Street
Fresno, CA 93706

Subject: Kern Front No. 2 Treatment Facility – May 13267 Order

Dear Mr. Holcomb:

Valley Water Management Company (Valley Water) submits this letter as the requested technical report. Attached with this letter is a summary table presenting total volumes of produced water provided for irrigation since January 1, 2014 as required by CVRWQCB's order under the California Water Code Section 13267 (13267 Order), dated May 2, 2016, and received by Valley Water on May 4, 2016. In addition, Valley Water has enclosed material safety data sheets (MSDS) for all chemicals and additives used in treatment and transportation processes while the produced water is in Valley Water's custody. We do not have information on chemical used prior to the produced water's arrival at Valley Water's Kern Front facility. The chemicals and additives used by Valley Water consist of the following:

Copper sulfate:

This additive is used to eliminate any algal blooms that occur in the produced water. Valley Water uses approximately 250 pounds of copper sulfate in powder form every quarter. Please see the attached spreadsheet for a quarter-by-quarter breakdown for the timeframe of the 13267 Order.

BPW 76910 ANTIFOAM:

This additive is used as a de-foaming agent and is applied in liquid form on an as-needed basis. Valley Water uses approximately 110 gallons of this antifoaming substance every quarter. Please see the attached spreadsheet for a quarter-by-quarter breakdown for the timeframe of the 13267 Order.

TRETOLITE RBW515 WATER CLARIFIER:

This additive is used as a clarifying agent and is applied in liquid form on an as-needed basis. Valley Water uses between 50 and 150 gallons approximately every few days for a total usage of approximately 1,100 gallons per quarter. Please see the attached

spreadsheet for a detailed breakdown of usage and volume for the timeframe of the 13267 Order.

I certify under penalty of law that this document and all attachments relevant to the 13267 Order, were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations

Please contact me at the number in this letterhead, or email me at czimmerman@valleywatermanagement.org if you have any questions.

Sincerely,

Christine Zimmerman

Christine Zimmerman
Regulatory Affairs Advisor
Valley Water Management Company

cc: Russell Emerson, Valley Water
Jon Fivecoat, Valley Water
Gary Carlton, Kennedy/Jenks
Melissa Thorme, Downey Brand LLP

KF2 WATER VOLUMES IN BARRELS

	BELLAIRE	CRC	TOTAL	BELLAIRE %	CRC %
2014*					
Q1	1,974,690	12,505,274	**14,479,964**	14%	86%
Q2	1,936,960	11,812,132	**13,749,092**	14%	86%
Q3	2,064,114	12,589,675	**14,653,789**	14%	86%
Q4	1,945,542	11,636,077	**13,581,619**	14%	86%
2015					
Q1	1,913,904	11,943,011	**13,856,915**	14%	86%
Q2	1,932,274	12,265,092	**14,197,366**	14%	86%
Q3	1,975,716	10,939,350	**12,915,066**	15%	85%
Q4	2,151,766	6,959,141	**9,110,907**	24%	76%
2016					
Q1	1,987,610	6,585,730	**8,573,340**	23%	77%

*2014 AUGUST THROUGH 1ST WEEK NOV: BELLAIRE VOLUMES WERE ESTIMATED AS METER WAS BROKEN.
159,210 BBL/WEEK

KF2 CHEMICALS

INV DATE	CHEMICAL NO.	DESCRIPTION	GALLONS		
12/19/14	RBW515	WATER CLARIFIER	165		
			165	**2014 TOTAL**	**WATER CLARIFIER**
01/21/15	RBW515	WATER CLARIFIER	55		
01/22/15	RBW515	WATER CLARIFIER	165		
01/30/15	RBW515	WATER CLARIFIER	55		
02/03/15	RBW515	WATER CLARIFIER	55		
02/09/15	RBW515	WATER CLARIFIER	110		
02/13/15	RBW515	WATER CLARIFIER	110		
02/26/15	RBW515	WATER CLARIFIER	55		
02/27/15	RBW515	WATER CLARIFIER	110		
03/06/15	RBW515	WATER CLARIFIER	165		
03/13/15	RBW515	WATER CLARIFIER	110		
03/27/15	RBW515	WATER CLARIFIER	165		
			1,155	**2015 Q1 TOTAL**	**WATER CLARIFIER**
04/06/15	RBW515	WATER CLARIFIER	165		
04/10/15	RBW515	WATER CLARIFIER	110		
04/24/15	RBW515	WATER CLARIFIER	110		
05/08/15	RBW515	WATER CLARIFIER	165		
05/18/15	RBW515	WATER CLARIFIER	165		
06/08/15	RBW515	WATER CLARIFIER	165		
06/12/15	RBW515	WATER CLARIFIER	110		
06/19/15	RBW515	WATER CLARIFIER	110		
06/26/15	RBW515	WATER CLARIFIER	110		
			1,210	**2015 Q2 TOTAL**	**WATER CLARIFIER**
07/07/15	RBW515	WATER CLARIFIER	110		
07/10/15	RBW515	WATER CLARIFIER	110		
07/20/15	RBW515	WATER CLARIFIER	165		
07/24/15	RBW515	WATER CLARIFIER	110		
07/31/15	RBW515	WATER CLARIFIER	110		
08/07/15	RBW515	WATER CLARIFIER	55		
08/14/15	RBW515	WATER CLARIFIER	110		
08/21/15	RBW515	WATER CLARIFIER	110		
09/04/15	RBW515	WATER CLARIFIER	110		
09/11/15	RBW515	WATER CLARIFIER	110		
09/25/15	RBW515	WATER CLARIFIER	110		
			1,210	**2015 Q3 TOTAL**	**WATER CLARIFIER**
10/09/15	RBW515	WATER CLARIFIER	110		

KF2 CHEMICALS

10/30/15	RBW515	WATER CLARIFIER	110		
11/11/15	RBW515	WATER CLARIFIER	110		
11/13/15	RBW515	WATER CLARIFIER	110		
11/20/15	RBW515	WATER CLARIFIER	110		
12/04/15	RBW515	WATER CLARIFIER	110		
12/14/15	RBW515	WATER CLARIFIER	110		
12/18/15	RBW515	WATER CLARIFIER	165		
			935	**2015 Q4 TOTAL**	**WATER CLARIFIER**
01/11/16	RBW515	WATER CLARIFIER	110		
01/15/16	RBW515	WATER CLARIFIER	110		
01/29/16	RBW515	WATER CLARIFIER	110		
02/05/16	RBW515	WATER CLARIFIER	110		
02/16/16	RBW515	WATER CLARIFIER	165		
02/18/16	RBW515	WATER CLARIFIER	165		
02/26/16	RBW515	WATER CLARIFIER	55		
03/04/16	RBW515	WATER CLARIFIER	55		
03/18/16	RBW515	WATER CLARIFIER	110		
03/31/16	RBW515	WATER CLARIFIER	165		
			1,155	**2016 Q1 TOTAL**	**WATER CLARIFIER**

KF2 CHEMICALS

DATE	CHEMICAL NO.	DESCRIPTION	LBS		
	CSMSA50L40	COPPER SULFATE	250	**Q1 2014**	
	CSMSA50L40	COPPER SULFATE	250	**Q2 2014**	
	CSMSA50L40	COPPER SULFATE	300	**Q3 2014**	
	CSMSA50L40	COPPER SULFATE	325	**Q4 2014**	
			1,125		**2014 TOTAL**
	CSMSA50L40	COPPER SULFATE	375	**Q1 2015**	
	CSMSA50L40	COPPER SULFATE	250	**Q2 2015**	
	CSMSA50L40	COPPER SULFATE	250	**Q3 2015**	
	CSMSA50L40	COPPER SULFATE	175	**Q4 2015**	
			1,050		**2015 TOTAL**
	CSMSA50L40	COPPER SULFATE	200	**Q1 2016**	

ACTUAL PURCHASE DATES

12/06/13	CSMSA50L40	COPPER SULFATE	500	JAN - JUN 2014
06/10/14	CSMSA50L40	COPPER SULFATE	500	JUL - NOV 2014
11/10/14	CSMSA50L40	COPPER SULFATE	500	DEC 2014 - MAR 2015
03/10/15	CSMSA50L40	COPPER SULFATE	500	APR - SEPT 2015
09/09/15	CSMSA50L40	COPPER SULFATE	500	OCT 2015 - PRESENT

KF2 CHEMICALS

KF2 CHEMICALS

INV DATE	CHEMICAL NO.	DESCRIPTION	GALLONS	
			-	**2015 Q1 TOTAL ANTI-FOAM**
			-	**2015 Q2 TOTAL ANTI-FOAM**
07/20/15	BPW76910	ANTI-FOAM	110	
07/31/15	BPW76910	ANTI-FOAM	180	
08/07/15	BPW76910	ANTI-FOAM	55	
08/21/15	BPW76910	ANTI-FOAM	110	
09/04/15	BPW76910	ANTI-FOAM	110	
			565	**2015 Q3 TOTAL ANTI-FOAM**
			-	**2015 Q4 TOTAL ANTI-FOAM**
01/11/16	BPW76910	ANTI-FOAM	110	
01/29/16	BPW76910	ANTI-FOAM	110	
			220	**2016 Q1 TOTAL ANTI-FOAM**

MATERIAL SAFETY DATA SHEET

Product Name: **Copper Sulfate Crystal**
Date Prepared: September 22, 2004

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Chemical Name: Copper Sulfate Pentahydrate CAS #: 7758-99-8
Synonyms: Bluestone; Blue Vitriol; Cupric sulfate
Product Use: For Commercial Use
Registration Number: 73385-1
Company Name:

Fabrica de Sulfato el Aguila, S.A. de C.V. Phone: (52+33) 3688 - 6719
Carr. Guadalajara-Chapala Km. 17.5 N 8100
Tlajomulco de Zuñiga, Jalisco C.P. 45640 Mexico Emergency: CHEMTREC (800) 424-9300 (24 HOURS)

Section 2 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS#	Component	Percent	EHS	NTP	IARC	Sub Z	SARA 313	OSHA PEL	ACGIH TLV	Other Limits
7758-99-8	Copper Sulfate Pentahydrate	99%	N	N	N	Y	Y	1 mg/M3	1 mg/M3	1 mg/M3

Section 3 - HAZARDS IDENTIFICATION

Emergency Overview

Copper Sulfate Crystal is a blue crystalline odorless solid. Potentially fatal if swallowed. May cause irritation to the eyes and skin. Fire may produce irritating, corrosive and/or toxic fumes. Firefighters should use full protective equipment and clothing.

Hazard Category:

Acute : x Chronic: x Fire: Pressure: Reactive:

HMIS ratings: **Health Hazard:** **2*** **Fire Hazard:** **0** **Physical Hazard:** **1**
Hazard Scale:
0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

Section 4 - FIRST AID MEASURES

Route(s) of Entry:

Eye Skin, Ingestion

Health Hazards (Acute and Chronic):

Can cause skin and eye irritation. Prolonged or repeated skin contact may cause dermatitis. Prolonged or repeated contact may cause conjunctivitis.

Signs and Symptoms:

EYE: Can cause severe eye irritation and may result in irreversible eye damage.
SKIN CONTACT: Can cause severe skin irritation. May cause localized discoloration of the skin.

INGESTION: Can result in digestive tract irritation with abdominal pain.

Section 4 - FIRST AID MEASURES (Continued)

Emergency First Aid Procedure:

If in eyes:

-> Flush with plenty of water. Call a physician.

If on skin:

-> Wash with plenty of soap and water. Get medical attention.

If swallowed:

-> Drink promptly a large quantity of milk, egg white, gelatin solution or, if these are not available, large quantities of water. Avoid alcohol.

Other Health Warnings:

Note to Physician: Probable mucosal damage may contraindicate the use of gastric lavage.

Section 5 - FIRE FIGHTING MEASURES

Flash Point:	N/A	**Method Used:**	N/A
Upper Flammable Lin	N/A	**Lower Flammable Limit:**	N/A
Auto Ignition:	N/A	**Flammability Classification:**	N/A
Rate of Burning:	N/A		

General Fire Hazards

Copper Sulfate Pentahydrate is not combustible, but may decompose in the heat of a fire to produce corrosive and/or toxic fumes.

Hazardous Combustion Products

Sulfur oxides and copper fumes

Extinguishing Media

Dry chemical, carbon dioxide, water spray or foam. For large fires use water spray, or alcohol foam.

Fire Fighting Equipment / Instructions

Firefighters should wear full protective clothing including self-contained breathing apparatus. Run-off from fire control or dilution water may be corrosive and/or toxic and cause pollution. Avoid direct water stream on molten material, move containers from fire area if possible, do not scatter spilled area with more water than needed for fire control, dike fire control water for later disposal. Use agents suitable for type of fire. Avoid breathing vapors or dust.

NFPA Ratings:

Health: 2	**Fire:** 0	**Reactivity:** 1	**Other:**	
Hazard Scale:	0 = Minimal	1 = Slight	2 = Moderate	3 = Serious	4 = Severe

Section 6 - ACCIDENTAL RELEASE MEASURES

Steps to be Taken in Case Material is Released or Spilled:

Use clean-up methods that avoid dust generation (vacuum, wet). Wear a NIOSH or MSHA approved respirator if

dust will be generated in clean-up. Use protective clothing if skin contact is likely. If spilled solution is in a confined area, introduce lime or soda ash to form insoluble copper salts and dispose of by approved method. Prevent accidental entry of solution into streams and other water bodies. Shovel any spills into plastic bags and seal with tape. Copper sulfate solution may deteriorate concrete.

Section 7 - HANDLING AND STORAGE

Precautions to be Taken

Avoid breathing dust or solution mist. Sweep up crystals or powder, vacuum is preferred. Eye wash stations should be available in work areas. Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Other Precautions:

Store in closed containers in cool, dry, well-ventilated area away from heat sources and reducing agents. Store copper sulfates in stainless steel, fiberglass, polypropylene, PVC's or plastic equipment. If container or bag is damaged, place the container or bag in a plastic bag. Use good housekeeping practices to avoid dust accumulation.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTIVE EQUIPMENT

Ventilation Requirements:

Use adequate general or local ventilation to keep airborne concentrations below the exposure limits.

Personal Protective Equipment:

Respirator:	NIOSH approved respirator for toxic dust mist. The respirator selected must be based on contamination levels found in the work area. Supply air respirator with full-face piece.
Immediately Dangerous Life or Health Conditions:	Self-contained breathing apparatus operated in pressure-demand or other positive pressure mode.
Clothing:	Individuals must wear appropriate protective clothing and equipment to prevent repeated or prolonged skin contact.
Gloves:	Individuals must wear appropriate gloves to prevent contact with substance.
Eye Protection:	Individuals must wear splash proof or dust resistance safety goggles to prevent eye contact with this substance.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Chemical Formula:	$CuSO_4*5H_2O$	**Melting Point:**	110°C
Appearance and Odo	Blue crystals, odorless	**Vapor Density (Air = 1):**	8.6
Specific Gravity (H_2O	2.284	**Vapor Pressure (mm Hg)**	N/A
Solubility (H_2O) :	22.37% @ 0° C, 117.95% @ 100° C	**Evaporation Rate (Butyl Acetate = 1**	NI
Molecular Weight:	249.68	**pH:**	3.7 - 4.2 (10% solution)

Solvent Solubility: Solvent in methanol,glycerol and slightly soluble in ethanol.

Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

Stability:
Stable under normal temperatures and pressures.

Incompatibility (Materials to avoid)
None when product remains dry. Acetylene gas, aluminum powder, hydroxylamine, magnesium, moist air. Contact with magnesium metal can generate dangerous levels of hydrogen gas.

Decomposition / By-Products:
At temperatures >600°C material decomposes to cupric oxide and sulfur dioxide.

Hazardous Polymerization:
Will not occur.

Section 11 - TOXICOLOGICAL INFORMATION

Skin LD50:	N/A	**Sub Acute Dietary LC50:**	N/A
Oral LD50:	N/A	**96-hr Acute Toxicity LD50:**	N/A
Inhalation LC50:	N/A	**48-hr LC50:**	N/A
Primary Eye Irritatior	Irritant	**24-hr LC50:**	N/A
Primary Skin Irritatio	Irritant	**Carcinogenic:**	Not listed by NTP, IARC, or OSHA.

Poisoning may affect the liver and/or kidneys and gastrointestinal tract. Persons with a history of chronic respiratory or skin disease may be at increased risk from exposure.

Section 12 - ECOLOGICAL INFORMATION

This pesticide is toxic to fish. Direct application of copper sulfate to water may cause a significant reduction in population of aquatic invertebrates, plants and fish. Do not treat more than one-half of a lake or pond at one time in order to avoid depletion of oxygen from decaying vegetation. Allow 1 to 2 weeks between treatment for oxygen levels to recover. Trout and other species of fish may be killed at application rates recommended on this label, especially in soft or acid waters. However, fish toxicity generally decreases as the hardness of water increases. Do not contaminate water by cleaning of equipment or disposal of wastes.

This pesticide is toxic to fish and aquatic organisms. Do not discharge effluent containing this product into lakes, streams, ponds estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority, except when product is labeled for use in sewers and bears such use instructions. For guidance, contact your State Water Board or Regional Office of the EPA.

Section 13 - DISPOSAL CONSIDERATIONS

Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environtmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container Disposal: (Paper Bag)
If empty: Do not reuse this container. Dispose of empty bag in the sanitary landfill or by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.
If partly filled: Call your local solid waste agency or 1-800-CLEANUP for disposal instructions. Never place unused product down any indoor or outdoor drain.

Container Disposal: (Plastic Pail)
If empty: Do not reuse this container. Triple rinse (or equivalent). Then offer for recycling or re-conditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

If partly filled: Call your local solid waste agency or 1-800-CLEANUP for disposal instructions. Never place unused product down any indoor or outdoor drain.

Section 14 - TRANSPORTATION INFORMATION

	Proper Shipping Name	Hazard Class	ID	PG
DOT	Environmentally Hazardous Substance Solid, N.O.S., (Cupric Sulfate)*	9	UN3077	III
	Reportable Quantity (RQ) = 10 pounds (4.54 kg)			

* Applicable when product is shipped in packaging of 10 pounds or greater.

Section 15 - REGULATORY INFORMATION

OSHA STATUS: This product is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

TSCA STATUS: This product is exempt from TSCA Regulation under FIFRA Section 3(2)(B)(ii) when used as a pesticide.

SARA TITLE III:

SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES:	None
SECTION 311/312 HAZARD CATEGORIES:	Immediate Health Hazard, Delayed Health Hazard
SECTION 313 TOXIC CHEMICALS:	Copper Sulfate, anhydrous CAS # 7758-98-7

RCRA STATUS: When discarded in its purchased form, this product is a listed RCRA hazardous waste and should be managed as a hazardous waste. (40 CFR part 261.20-24)

Section 16 - OTHER INFORMATION

The information and statements in this Material Safety Data Sheet are believed to accurately reflect the scientific evidence used in making the hazard determination, but is not to be construed as a warranty or representation for which we assume legal responsibility. Additional information may be necessary or desirable depending on particular, exceptional or variable conditions or circumstances of use or storage or because of locally applicable laws or government regulations. Therefore, you should use this information only as a supplement to other information available to you and must make independent determinations of the suitability of the information for your particular circumstances or conditions and of the completeness of the information available from all sources to assure both the proper use of the material described herein and the safety and health of employees.

SAFETY DATA SHEET

Section 1. Identification

Product name : BPW 76910 ANTIFOAM
Product code : BPW76910

Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Antifoam.

Print date : 3/23/2015.
Validation date : 3/23/2015.
Version : 1

Supplier's details : Baker Petrolite
A Baker Hughes Company
12645 W. Airport Blvd.
Sugar Land, TX 77478
For Product Information/SDSs Call: 800-231-3606
(8:00 a.m. - 5:00 p.m. cst, Monday - Friday) 281-276-5400

Emergency telephone number (with hours of operation) : CHEMTREC: 800-424-9300 (U.S. 24 hour)
Baker Petrolite: 800-231-3606
(001)281-276-5400
CANUTEC: 613-996-6666 (Canada 24 hours)
CHEMTREC Int'l 01-703-527-3887 (International 24 hour)

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : SKIN CORROSION/IRRITATION - Category 2
CARCINOGENICITY - Category 2

GHS label elements

Hazard pictograms :

Signal word : Warning

Hazard statements : Causes skin irritation.
Suspected of causing cancer.

Precautionary statements

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wear protective gloves: > 8 hours (breakthrough time): Nitrile or Neoprene gloves.. Wash hands thoroughly after handling.

Response : IF exposed or concerned: Get medical attention. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical attention.

Storage : Store locked up.

Section 2. Hazards identification

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements : Avoid contact with skin and clothing. Wash thoroughly after handling.

Hazards not otherwise classified : Prolonged or repeated contact may dry skin and cause irritation.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
Paraffinic petroleum distillate	30 - 40	64742-55-8
Petroleum distillates	30 - 40	64742-53-6
Kerosene	10 - 20	8008-20-6
Fatty acid	1 - 5	143-07-7
Ethoxylated octylphenol	1 - 5	Trade secret.
Naphthalene	0.1 - 1	91-20-3

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Continue to rinse for at least 10 minutes. Check for and remove any contact lenses. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Wash skin thoroughly with soap and water or use recognized skin cleanser. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : No known significant effects or critical hazards.

Skin contact : Causes skin irritation. Defatting to the skin.

Ingestion : Irritating to mouth, throat and stomach.

Over-exposure signs/symptoms

Eye contact : pain or irritation,watering,redness

Inhalation : No specific data.

Section 4. First aid measures

Skin contact : irritation,redness,dryness,cracking

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Additional information

If product is ingested and vomiting occurs naturally, have person lean forward to reduce the risk of aspiration into the lungs.

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products : carbon dioxide,carbon monoxide

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Section 6. Accidental release measures

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Dike spill area and do not allow product to reach sewage system or surface or ground water. Notify any reportable spill to authorities. (See section 12 for environmental risks and 13 for disposal information.) Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

If RQ (Reportable Quantity) is exceeded, report to National Spill Response Office at 1-800-424-8802.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits		TWA (8 hours)			STEL (15 mins)			Ceiling			
Ingredients:	List name	ppm	mg/m³	Other	ppm	mg/m³	Other	ppm	mg/m³	Other	Notations
Paraffinic petroleum distillate	US ACGIH	-	5	-	-	-	-	-	-	-	[a]
	US ACGIH	-	5	-	-	-	-	-	-	-	[b]
	OSHA PEL	-	5	-	-	-	-	-	-	-	
Petroleum distillates	US ACGIH	-	5	-	-	-	-	-	-	-	[a]
	US ACGIH	-	5	-	-	-	-	-	-	-	[b]
	OSHA PEL	-	5	-	-	-	-	-	-	-	[b]
	OSHA PEL	-	5	-	-	-	-	-	-	-	
Kerosene, as total hydrocarbon vapor	US ACGIH	-	200	-	-	-	-	-	-	-	[1]
Naphthalene	US ACGIH	10	52	-	-	-	-	-	-	-	[1]
	OSHA PEL	10	50	-	-	-	-	-	-	-	
	OSHA PEL 1989	10	50	-	15	75	-	-	-	-	

Section 8. Exposure controls/personal protection

[1]Absorbed through skin.
Form: [a]Inhalable fraction [b]Inhalable fraction.

Consult local authorities for acceptable exposure limits.
Only components of this product with established exposure limits appear in the box above.
If OSHA permissible exposure levels are shown above they are the OSHA 1989 levels or are from subsequent OSHA regulatory actions. Although the 1989 levels have been vacated the 11th Circuit Court of Appeals, Baker Hughes recommends that these lower exposure levels be observed as reasonable worker protection.

Appropriate engineering controls : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Wear chemical safety goggles. When transferring material wear face-shield in addition to chemical safety goggles.

Hand protection : Chemical-resistant gloves: Nitrile or Neoprene gloves.

Skin protection : Wear long sleeves to prevent repeated or prolonged skin contact.

Respiratory protection : If a risk assessment indicates it is necessary, use a properly fitted, air purifying or supplied air respirator complying with an approved standard. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid. [Clear to hazy.]

Color : Yellow. [Light]

Odor : Aromatic hydrocarbon. [Slight]

Odor threshold : Not available.

pH : 4.3 to 5.3

: 5% of product in 75% isopropanol / 25% water solution

Melting/freezing point : <0°C (<32°F)

Boiling point : Not available.

Initial Boiling Point : Not available.

Flash point : Closed cup: 93.9°C (201°F) [SFCC]

Burning time : Not applicable.

Burning rate : Not applicable.

Evaporation rate : Not available.

Flammability (solid, gas) : Slightly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : 0.12 kPa (0.89 mm Hg) @ 21.1°C (Calculated Value for all Components.)

Vapor density : >1 [Air = 1]

Relative density : 0.8928 (15.6°C)

Section 9. Physical and chemical properties

Density : 7.44 (lbs/gal)

Solubility in water : Insoluble

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Dynamic (15.6°C): 34 cP

VOC : Not available.

Pour Point : -15°C (5°F)

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : Slightly reactive or incompatible with the following materials: oxidizing materials.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Paraffinic petroleum distillate	LC50 Inhalation Dusts and mists	Rat	3900 mg/m³	4 hours
Petroleum distillates	LC50 Inhalation Dusts and mists	Rat	2180 mg/m³	4 hours
	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
Kerosene	LD50 Oral	Rat	15 g/kg	-
Fatty acid	LD50 Oral	Rat	12 g/kg	-
Ethoxylated octylphenol	LD50 Oral	Mouse	3500 mg/kg	-
	LD50 Oral	Rat	4190 mg/kg	-
Naphthalene	LD50 Dermal	Rabbit	>20 g/kg	-

Irritation/Corrosion

No applicable toxicity data

Sensitization

No applicable toxicity data

Mutagenicity

No applicable toxicity data

Carcinogenicity

Section 11. Toxicological information

Product/ingredient name	OSHA	IARC	NTP
Petroleum distillates	-	3	-
Kerosene	-	3	-
Naphthalene	-	2B	Reasonably anticipated to be a human carcinogen.

Reproductive toxicity

No applicable toxicity data

Teratogenicity

No applicable toxicity data

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Kerosene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

Specific target organ toxicity (repeated exposure)

Not applicable.

Aspiration hazard

Name	Result
Paraffinic petroleum distillate	ASPIRATION HAZARD - Category 1
Petroleum distillates	ASPIRATION HAZARD - Category 1
Kerosene	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Routes of entry anticipated: Dermal, Inhalation.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

General : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	202562.2 mg/kg

Section 11. Toxicological information

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Ethoxylated octylphenol	Acute EC50 210 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute LC50 10800 µg/l Marine water	Crustaceans - Pandalus montagui - Adult	48 hours
	Acute LC50 8600 to 9800 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 7200 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
Naphthalene	Acute EC50 1.6 ppm Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 2350 µg/l Marine water	Crustaceans - Palaemonetes pugio	48 hours
	Acute LC50 213 µg/l Fresh water	Fish - Melanotaenia fluviatilis - Larvae	96 hours
	Chronic NOEC 0.67 ppm Fresh water	Fish - Oncorhynchus kisutch	40 days
BPW 76910 ANTIFOAM	Acute LC50 4.76 mg/l	Daphnia	48 hours
	Acute LC50 0.43 mg/l	Daphnia	48 hours
	Acute LC50 268.2 mg/l	Fish	96 hours

Persistence and degradability

Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-
Transport hazard class(es)	-	-	-	-

Section 14. Transport information

Packing group	-	-	-	-
Environmental hazards	No.	No.	No.	No.
Additional information	-	-	-	-

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

DOT Reportable Quantity Not applicable.

Marine pollutant Not available.

North-America NAERG : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 5(a)2 proposed significant new use rules**: lauric acid
TSCA 12(b) one-time export: lauric acid
TSCA 12(b) annual export notification: No products were found.
United States inventory (TSCA 8b): All components are listed or exempted.
Clean Water Act (CWA) 307: Naphthalene
Clean Water Act (CWA) 311: Naphthalene

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

SARA 302/304 : No products were found.

SARA 311/312

Classification : Immediate (acute) health hazard
Delayed (chronic) health hazard

SARA 313

	Product name	CAS number	%
Supplier notification	Naphthalene	91-20-3	0.1 - 1

Canada

Canada (CEPA DSL): : All components are listed or exempted.

Section 16. Other information

National Fire Protection Association (U.S.A.)

History

Date of printing : 3/23/2015.

Indicates information that has changed from previously issued version.

Notice to reader

NOTE: The information on this SDS is based on data which is considered to be accurate. Baker Hughes, however, makes no guarantees or warranty, either expressed or implied of the accuracy or completeness of this information.

The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of this product.

This SDS was prepared and is to be used for this product. If the product is used as a component in another product, this SDS information may not be applicable.

SAFETY DATA SHEET

Section 1. Identification

Product name : TRETOLITE™ RBW515 WATER CLARIFIER
™ a trademark of Baker Hughes Incorporated.

Product code : RBW515

Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Water clarifier.

Print date : 2/19/2016.

Validation date : 2/19/2016.

Version : 1.01

Supplier's details : Baker Petrolite LLC
12645 W. Airport Blvd.
Sugar Land, TX 77478
For Product Information/SDSs Call: 800-231-3606
(8:00 a.m. - 5:00 p.m. CST, Monday - Friday) 281-276-5400

Emergency telephone number (with hours of operation) : CHEMTREC: 800-424-9300 (U.S. 24 hour)
Baker Petrolite: 800-231-3606
(001)281-276-5400
CANUTEC: 613-996-6666 (Canada 24 hours)
CHEMTREC Int'l 01-703-527-3887 (International 24 hour)

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : SKIN CORROSION/IRRITATION - Category 2
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) [Narcotic effects] - Category 3

GHS label elements

Hazard pictograms :

Signal word : Warning

Hazard statements : Causes skin irritation.
May cause drowsiness and dizziness.

Precautionary statements

Prevention : Wear protective gloves: > 8 hours (breakthrough time): Nitrile or Neoprene gloves.. Use only outdoors or in a well-ventilated area. Avoid breathing vapor. Wash hands thoroughly after handling.

Response : IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical attention.

Storage : Store locked up.

Section 2. Hazards identification

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements : Avoid contact with skin and clothing. Wash thoroughly after handling.

Hazards not otherwise classified : Prolonged or repeated contact may dry skin and cause irritation.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
Petroleum distillates	20 - 30	64742-47-8
Alkoxylated alcohol	1 - 5	Trade secret.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Continue to rinse for at least 10 minutes. Check for and remove any contact lenses. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact : Wash skin thoroughly with soap and water or use recognized skin cleanser. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : Causes skin irritation. Defatting to the skin.

Ingestion : Can cause central nervous system (CNS) depression. Irritating to mouth, throat and stomach.

Section 4. First aid measures

Over-exposure signs/symptoms

Eye contact : pain or irritation,watering,redness

Inhalation : nausea or vomiting,headache,drowsiness/fatigue,dizziness/vertigo,unconsciousness

Skin contact : irritation,redness,dryness,cracking

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Additional information

If product is ingested and vomiting occurs naturally, have person lean forward to reduce the risk of aspiration into the lungs.

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products : carbon dioxide,carbon monoxide,nitrogen oxides,halogenated compounds

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Section 6. Accidental release measures

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Dike spill area and do not allow product to reach sewage system or surface or ground water. Notify any reportable spill to authorities. (See section 12 for environmental risks and 13 for disposal information.) Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Additional information

Spills of this product are very slippery. Spilled material should be absorbed onto an inert material and scooped up. The area should be thoroughly flushed with water and washed to remove residue. If area is still slippery, apply more dry-sweeping compound.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store between the following temperatures: 0 to 30°C (32 to 86°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits		TWA (8 hours)			STEL (15 mins)			Ceiling			
Ingredients:	List name	ppm	mg/m³	Other	ppm	mg/m³	Other	ppm	mg/m³	Other	Notations
Petroleum distillates, as total hydrocarbon vapor	US ACGIH	-	200	-	-	-	-	-	-	-	[1]

[1]Absorbed through skin.

Consult local authorities for acceptable exposure limits.
Only components of this product with established exposure limits appear in the box above.

Section 8. Exposure controls/personal protection

If OSHA permissible exposure levels are shown above they are the OSHA 1989 levels or are from subsequent OSHA regulatory actions. Although the 1989 levels have been vacated the 11th Circuit Court of Appeals, Baker Hughes recommends that these lower exposure levels be observed as reasonable worker protection.

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Wear chemical safety goggles. When transferring material wear face-shield in addition to chemical safety goggles.

Hand protection : Chemical-resistant gloves: Nitrile or Neoprene gloves.

Skin protection : Wear long sleeves to prevent repeated or prolonged skin contact.

Respiratory protection : If a risk assessment indicates it is necessary, use a properly fitted, air purifying or supplied air respirator complying with an approved standard. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Color : Milky-white.

Odor : Aliphatic hydrocarbon.

Odor threshold : Not available.

pH : 4 to 6

: 5% in water

Melting/freezing point : <5°C (<41°F)

Boiling point : >100°C (>212°F)

Initial Boiling Point : Not available.

Flash point : Closed cup: >93.4°C (>200.1°F)

Burning time : Not applicable.

Burning rate : Not applicable.

Evaporation rate : Not available.

Flammability (solid, gas) : Slightly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : Not available.

Relative density : 1.02 (15.6°C)

Density : 8.5 (lbs/gal)

Solubility in water : Limited by viscosity.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Section 9. Physical and chemical properties

Decomposition temperature : Not available.

Viscosity : Dynamic (20°C): 1200 cP

VOC : Not available.

Pour Point : Not available.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : Reactive or incompatible with the following materials: oxidizing materials.
Do not use iron, copper, or aluminum for transportation, handling, or storage.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Petroleum distillates TRETOLITE™ RBW515 WATER CLARIFIER	LD50 Oral LD50 Oral	Rat Rat	>5000 mg/kg >5000 mg/kg	- -

Irritation/Corrosion

No applicable toxicity data

Sensitization

No applicable toxicity data

Mutagenicity

No applicable toxicity data

Carcinogenicity

No applicable toxicity data

Reproductive toxicity

No applicable toxicity data

Teratogenicity

No applicable toxicity data

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Petroleum distillates	Category 3	Not applicable.	Narcotic effects

Section 11. Toxicological information

Specific target organ toxicity (repeated exposure)

Not applicable.

Aspiration hazard

Name	Result
Petroleum distillates	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Routes of entry anticipated: Dermal, Inhalation.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

General : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Additional information

This product contains trace quantities of acrylamide monomer. Acrylamide has been identified as a suspected cancer agent by the National Toxicology Program (NTP) and/or by the International Agency for Research on Cancer (IARC). Acrylamide is also a chemical known to the State of California to cause cancer under Proposition 65. May contain traces of formaldehyde, which has been proven to be a carcinogen.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Petroleum distillates	Acute LC50 2200 µg/l Fresh water Acute LC50 2900 µg/l Fresh water	Fish - Lepomis macrochirus Fish - Oncorhynchus mykiss	4 days 96 hours

Persistence and degradability

Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-
Transport hazard class(es)	-	-	-	-
Packing group	-	-	-	-
Environmental hazards	No.	No.	No.	No.
Additional information	-	-	-	-

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

DOT Reportable Quantity Not applicable.

Marine pollutant Not available.

North-America NAERG : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 12(b) one-time export**: No products were found.
TSCA 12(b) annual export notification: No products were found.
United States inventory (TSCA 8b): All components are listed or exempted.
Clean Water Act (CWA) 307: No products were found.
Clean Water Act (CWA) 311: No products were found.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

SARA 302/304 : No products were found.

SARA 311/312

Classification : Immediate (acute) health hazard

SARA 313

Supplier notification : No products were found.

Canada

Canada (CEPA DSL): : All components are listed or exempted.

Section 16. Other information

National Fire Protection Association (U.S.A.)

History

Date of printing : 2/19/2016.

Indicates information that has changed from previously issued version.

Notice to reader

NOTE: The information on this SDS is based on data which is considered to be accurate. Baker Hughes, however, makes no guarantees or warranty, either expressed or implied of the accuracy or completeness of this information.

The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of this product.

This SDS was prepared and is to be used for this product. If the product is used as a component in another product, this SDS information may not be applicable.